

# EMERGENCY SERVICES DIVISION

Procedure No. EP-SOP-5.3

## PROCEDURE

Revision No. 3

### BROOKHAVEN NATIONAL LABORATORY

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Procedure Title:

PLECTRON SYSTEM

#### 1.0 PURPOSE

##### 1.1 Introduction

- 1.1.1 This procedure describes the features, functions, operation, and testing of the Plectron System.
- 1.1.2 The Plectron System is part of the Laboratory Emergency Management Program which is used to alert laboratory personnel of emergency conditions (Warning and Notification System).
- 1.1.3 The Plectron Radio System is a system consisting of two transmitters located at Police Headquarters (Bldg. 50) and Building 754 (EOF), and numerous receivers distributed throughout the site. Locations of receivers are maintained by the Emergency Planning Group Supervisor.
- 1.1.4 The Plectron System may be activated after declaration of an Operational Emergency. Declaration of Operational Emergencies and activation of the Plectron System may be ordered by the Incident Commander, the Laboratory Emergency Supervisor (LES), or their designees.
- 1.1.5 The Plectron System is tested each Monday at Noon.

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## 1.2 Features and Functions

1.2.1 The Plectron System can be operated in three modes.

1.2.1.1 The first mode (Code 99) is a general call which activates all receivers for messages or protective actions pertinent to BNL's total population.

1.2.1.2 The second mode (code 01-20) is selective by geographic BNL evacuation zones. (The first set of numbers atop the receiver indicates the zone the receiver is in.)

1.2.1.3 The third mode (Code 30) is designed to activate only the receivers in selected buildings within which many of the emergency response personnel work.

## 2.0 RESPONSIBILITIES

### 2.1 Incident Commander, or LES

The Incident Commander, or LES is responsible for ordering of the initiation of the Plectron System following a laboratory emergency by contacting the Central Alarm Station (CAS) Operator in Bldg. 50, or the Tactical Operations Center (TOC) Commander when the Emergency Operations Facility (EOF) is activated.

### 2.2 Police CAS Officer (EOF not activated)

2.2.1 The CAS operator is responsible for activating of the Plectron System.

2.2.2 The CAS Operator is responsible for transmitting plectron announcements prior to the EOF being activated.

### 2.3 TOC Commander (EOF activated)

2.3.1 The TOC Commander is responsible for transmitting Plectron announcements following the activation of the EOF.

### 2.4 Persons Assigned Plectron Receivers

Persons assigned Plectron receivers are responsible to:

2.4.1 Relay emergency messages to their department/division by public address, telephone, pager, or any other suitable means of communication.

2.4.2 Take the Plectron to the building assembly area, in the event of a BNL-wide emergency condition.

2.4.3 Contact the Emergency Planning Team Leader at Ext. 2563, or the Instrument Division Radio Shop for repair.

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## 2.5 Instrumentation Division

The Instrumentation Division Radio Shop is responsible for:

2.5.1 Performing routine maintenance on the Plectron receivers.

2.5.2 Replacing the batteries on an annual basis

## 3.0 DEFINITIONS

3.1 Laboratory Emergency Signals – Site Sirens and Plectron System

## 4.0 PREREQUISITES

An Alert or Site Area Emergency has been declared at BNL, or conditions warrant notification of the laboratory population of items of general interest e.g. power outage, heat stress alert, early dismissal.

## 5.0 PRECAUTIONS

5.1 Only the Incident Commander, the LES or their designees are authorized to order the activation of the Plectron System in the event of an Operational Emergency.

5.2 The Plectron receiver is equipped with a battery backup system. For normal operation, do not plug the transformer into an outlet controlled by a wall switch.

## 6.0 PROCEDURE

### 6.1 Plectron Messages Prior to EOF Activation

6.1.1 The Plectron Transmitter is located in the Police Group's Central Alarm Station (CAS) in Building 50. The CAS is manned continuously on a 24 hour basis.

6.1.2 The Plectron Transmitter shall be activated by the CAS Operator upon request of the Incident Commander or LES.

### 6.2 Plectron Messages after EOF Activation

6.2.1 The TOC Commander, or his designee shall activate the EOF transmitter in accordance with Police Group procedures.

## CAUTION

**FAILURE TO TRANSMIT THE MESSAGE WITHIN 5 SECONDS WILL RESULT IN THE PLECTRON RECEIVERS RESETTING AND THE MESSAGE WILL NOT BE RECEIVED**

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### 6.3 Plectron Receiver

#### 6.3.1 Receiver Setup:

- 6.3.1.1 A receptacle marked **"POWER"** which will accept the plug from the transformer supplied is located at the rear of the unit. That transformer is to be plugged into a wall outlet that is constantly on and not controlled by a wall switch.
- 6.3.1.2 The slide switch marked **"1 CH2"** must remain to the left which is the channel 1 position.
- 6.3.1.3 The receptacle marked **"EXT ANT"** accepts the wire whip antenna.
- 6.3.1.4 Push the **"OFF/ON"** button to the latched or in position. When used with the wall plug transformer, the red light will come on.
- 6.3.1.5 At the front of the receiver, rotate the **"VOLUME"** control until the marker is in the vertical position giving approximately half volume. In high noise areas, advance the control clockwise to increase the volume. Please remember this is a receiver for emergency purposes. It should get attention above the average noise in the area or the messages will not be noticed.
- 6.3.1.6 Push the **"MON ALERT"** button to the unlatched or out position.
- 6.3.1.7 Rotate the **"SQUELCH"** control clockwise starting from the full counter clockwise direction until the static just stops. In some later models, this procedure may be reversed.
- 6.3.1.8 Push the **"MON ALERT"** (button to the latched or in position).
- 6.3.1.9 The Plectron receiver is now adjusted and ready for emergency transmissions. Upon the receipt of a message, the red **"POWER"** on light will blink. It must be reset by pushing the **"ALERT/RESET"** button or additional messages will not be received.
- 6.3.1.10 The receivers are considered part of the emergency warning system and are tested each Monday, with the exception of holidays, at 1155 prior to the noon test of the emergency sirens. If the test message is not received at that time, please contact Extension 2563 or Pager 554-8081 to report operating difficulties.
- 6.3.1.11 It is the Plectron owner's responsibility to notify the EP Group Supervisor when messages are not heard every Monday, for repairs, or further information on the operation of this system. Contact the Emergency Planning Group Supervisor at Extension 2563 or Pager 554-8081.

#### 6.3.2 Battery Backup Operation:

- 6.3.2.1 In the event of a BNL emergency, the receiver **"POWER"** plug may be unplugged and the receiver will continue to function as a portable unit. The receiver shall then be taken to your assembly area or shelter area to await further instructions.



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6.3.2.2 To conserve the batteries, plug the AC adapter into a 120 vac outlet in the indoor assembly area or shelter area if possible.

6.3.2.3 In the event of a power interruption, the receiver switches automatically to the battery function.

6.3.2.4 In the battery function, the red light will not appear, but the receiver is operating.

6.3.2.5 When the emergency is over or the facility has to be evacuated, the receiver should be turned off.

6.3.2.6 Upon returning the receiver to its permanent position, plug the "POWER" plug back in and turn it on.

## 7.0 **IMPLEMENTATION AND TRAINING**

7.1 This procedure is implemented by posting it to the Emergency Planning Group Web Pages

7.2 Training on changes to this procedure is conducted via email notification to affected employees

7.3 The Web based training program for the Emergency Response Organization is modified as required.

## 8.0 **REFERENCES**

8.1 BNL Emergency Plan

8.2 Police Group Plectron Procedure

## 9.0 **ATTACHMENTS**

9.1 Plectron receiver

9.2 Pre-formatted plectron messages

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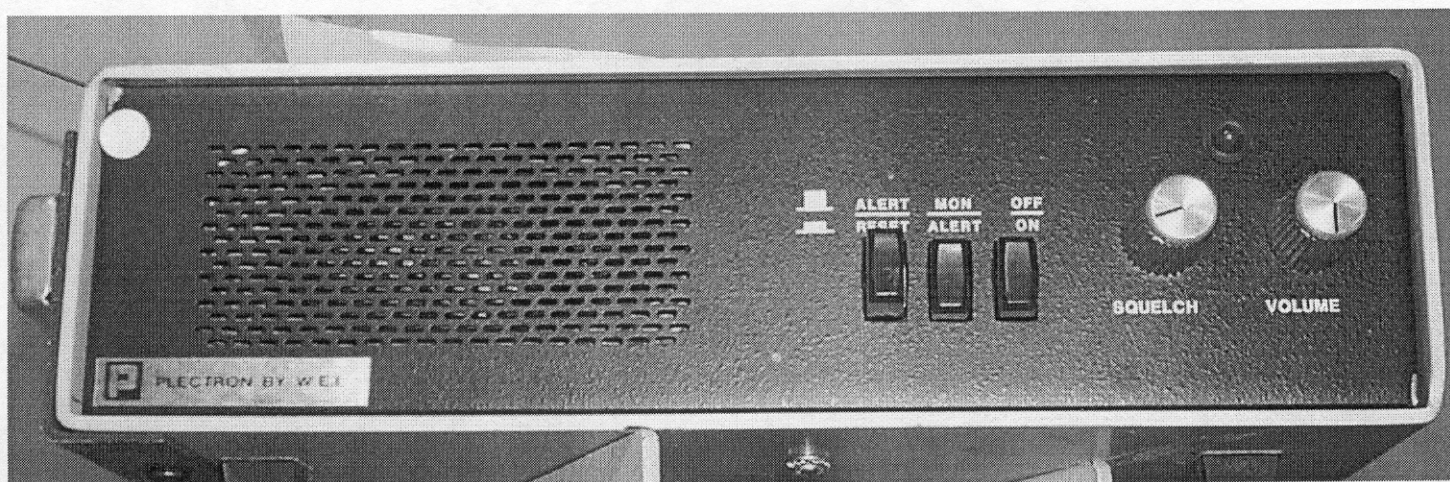
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**ATTACHMENT 1**

**PLECTRON RECEIVER**



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## ATTACHMENT 2

### PRE-FORMATTED PLECTRON MESSAGES

1. TEST (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 THIS IS A TEST OF THE PLECTRON WARNING SYSTEM.**
  
2. EMERGENCY RESPONSE PERSONNEL (Code 30)  
**ATTENTION ALL EMERGENCY RESPONSE PERSONNEL, ATTENTION ALL  
 EMERGENCY RESPONSE PERSONNEL.  
 EMERGENCY RESPONSE FACILITIES ARE BEING ACTIVATED. EMERGENCY  
 RESPONSE PERSONNEL REPORT TO YOUR ASSIGNED LOCATIONS IMMEDIATELY.**
  
3. ALERT (Latch ALERT siren for 5 minutes, at completion of the siren cycle, patch ALL frequencies, Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 AN ALERT HAS BEEN DECLARED. I REPEAT - AN ALERT HAS BEEN DECLARED.  
 NOTIFY ALL PERSONNEL IN YOUR BUILDING TO PROCEED TO THEIR ASSEMBLY  
 AREA. TAKE YOUR PLECTRON WITH YOU TO THE ASSEMBLY AREA.  
 ALL PARENTS WITH CHILDREN AT THE BNL CHILD DAY CARE CENTER, THE  
 KINDERGARTEN OR THE NURSERY SCHOOL, YOU ARE RELEASED TO PICK UP YOUR  
 CHILDREN.**
  
4. SELECTIVE EVACUATION (Patch ALL frequencies, Code 99)  
**ATTENTION ALL PERSONNEL - THIS IS A SELECTIVE EVACUATION BY ZONE.  
 ATTENTION ALL PERSONNEL - THIS IS A SELECTIVE EVACUATION BY ZONE  
 ALL PERSONNEL IN ZONE(S) \_\_\_\_\_ WHO DO NOT HAVE EMERGENCY  
 RESPONSIBILITIES ARE TO EVACUATE THE LABORATORY IMMEDIATELY. ALL  
 OTHER ZONES ARE TO STAY IN PLACE. RELAY THIS MESSAGE THROUGHOUT  
 YOUR DEPARTMENT.**
  
5. EVACUATION (Latch EVACUATION siren for five minutes, at completion of siren cycle, patch ALL frequencies, CODE 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. ALL PERSONNEL WHO  
 DO NOT HAVE EMERGENCY RESPONSIBILITIES ARE TO EVACUATE THE  
 LABORATORY IMMEDIATELY. RELAY THIS MESSAGE THROUGHOUT YOUR  
 DEPARTMENT.**



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6. SEVERE WEATHER WATCH (Patch ALL frequencies, Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.**  
**THE NATIONAL WEATHER SERVICE HAS ISSUED A SEVERE STORM WATCH, INCLUDING THE POSSIBILITY OF TORNADOS FOR THIS AREA UNTIL \_\_\_\_ (A.M., P.M.). CONSIDERATION SHOULD BE GIVEN TO EQUIPMENT AND STRUCTURES VULNERABLE TO HIGH WINDS DURING THIS PERIOD. OUTSIDE ACTIVITIES SHOULD BE REVIEWED IN REGARD TO THIS CONDITION. UPDATES TO THIS CONDITION WILL BE DELIVERED AS APPROPRIATE. RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**
7. SEVERE WEATHER WARNING (Latch ALERT siren for five minutes, following siren cycle, patch ALL frequencies, Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.**  
**THE NATIONAL WEATHER SERVICE HAS ISSUED A SEVERE WEATHER WARNING, INCLUDING THE POSSIBILITY OF TORNADOS FOR THIS AREA UNTIL \_\_\_\_ (A.M., P.M.). ALL OUTSIDE ACTIVITIES SHOULD BE TERMINATED AT THIS TIME. ALL OUTSIDE WORKERS SHOULD SEEK SHELTER IN THE NEAREST MAJOR BUILDING. BUILDING OCCUPANTS SHOULD AVOID WINDOW AREAS AND SEEK SHELTER WITHIN INTERIOR CORRIDORS. UPDATES TO THIS CONDITION WILL BE DELIVERED AS APPROPRIATE. RELY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**
8. AIRBORNE HAZARDOUS MATERIALS (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.**  
**DUE TO THE RELEASE OF AIRBORNE HAZARDOUS MATERIALS, PERSONNEL IN ZONE(S) \_\_\_\_\_ SHOULD REMAIN INDOORS. DOORS AND WINDOWS SHOULD BE CLOSED AND VENTILATION DRAWING OUTSIDE AIR SHOULD BE TURNED OFF. THE GENERAL LABORATORY POPULACE IS CAUTIONED TO AVOID ENTRY IN THESE ZONE(S) UNTIL FURTHER NOTICE. RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**
9. STORM CLOSING (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.**  
**DUE TO WEATHER CONDITIONS THE LABORATORY DIRECTOR HAS AUTHORIZED AN EXCUSED PERIOD STATUS BEGINNING AT \_\_\_\_ (A.M., P.M.) AND EXTENDING UNTIL \_\_\_\_ (A.M., P.M.) THE EXCUSED ABSENCE PERIOD APPLIES TO ALL PERSONNEL EXCEPT THOSE WITH EMERGENCY RESPONSIBILITIES. RESUMPTION OF NORMAL OPERATIONS WILL BE ANNOUNCED THROUGH THE REGULAR RADIO STATIONS. RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**



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10. HEAT STRESS (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 THE LABORATORY HAS ISSUED AN ENVIRONMENTAL HEAT STRESS ALERT. ALL OUTDOOR  
 MODERATE AND HEAVY WORK SHOULD BE AVOIDED. FOR ADDITIONAL GUIDANCE,  
 CONSULT YOUR SAFETY REPRESENTATIVE. RELAY THIS MESSAGE THROUGHOUT YOUR  
 DEPARTMENT.**
11. LIPA POWER CURTAILMENT (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 LIPA HAS REQUESTED THAT THE USE OF ELECTRIC POWER BE CURTAILED. WHEREVER  
 POSSIBLE, REDUCE POWER USAGE WITHOUT IMPACT ON YOUR PROGRAM. RELAY THIS  
 MESSAGE THROUGHOUT YOUR DEPARTMENT.**
12. LIPA POWER RESTORED (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 LIPA HAS RESCINDED THE REQUEST FOR POWER CURTAILMENT. THE LABORATORY MAY  
 RETURN TO NORMAL FULL POWER OPERATION. RELAY THIS MESSAGE THROUGHOUT  
 YOUR DEPARTMENT.**
13. TELEPHONE OUTAGE (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 DUE TO OPERATIONAL DIFFICULTIES, THE LABORATORY TELEPHONE SERVICE HAS BEEN  
 IMPAIRED. RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**
14. TELEPHONE RESTORED (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 FULL TELEPHONE SERVICE HAS BEEN RESTORED TO THE LABORATORY. RELAY THIS  
 MESSAGE THROUGHOUT YOUR DEPARTMENT.**
15. WATER MAIN BREAK (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 THE SITE HAS EXPERIENCED A MAJOR WATER MAIN BREAK. WATER PRESSURE AND  
 AVAILABILITY IS CRITICALLY LOW. WATER CONSUMPTION MUST BE RESTRICTED TO  
 ESSENTIAL USES. RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**
16. WATER MAIN RESTORED (Code 99)  
**ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL.  
 THE WATER MAIN BREAK HAS BEEN REPAIRED. NORMAL WATER USE CAN BE RESUMED.  
 RELAY THIS MESSAGE THROUGHOUT YOUR DEPARTMENT.**